Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-11-30-67** **Date: 19-12-20**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.
Agency	:	Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010
Customer's Reference	:	BBMP/EE/BTP/WO/136/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-11-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	21-11-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

* The results obtained are satisfactory as per standard requirements.

Note:

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All information furnished by Customer/Representative
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Suvetha. K K
AE Ward 10

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 22/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-11-20

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 22/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	24/11/2020	22/12/2020	150.70 X 151.80 X 150.45	22876	**8.255**	404.0	17.7	17.4
2	PCC	M15	24/11/2020	22/12/2020	150.75 X 150.49 X 151.79	22685	**8.021**	393.7	17.4	
3	PCC	M15	24/11/2020	22/12/2020	151.29 X 150.51 X 150.28	22772	**8.068**	391.4	17.2	

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

Sweetha. N.K
AE W10

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 24/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 28-11-20

Customer ID : Drain Bottom Slab Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	150.98 X 150.89 X 150.29	22781	**8.015**	529.3	23.2	22.9
2	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	151.99 X 151.66 X 150.10	23051	**8.067**	514.4	22.3	
3	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	150.05 X 149.85 X 150.10	22486	**8.105**	519.8	23.1	

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 24/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 28-11-20

Customer ID : Drain Bottom Slab Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 24/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	151.97 X 150.34 X 150.00	22847	**8.015**	542.2	23.7	23.5
2	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	150.07 X 150.98 X 149.26	22658	**8.067**	516.9	22.8	
3	Drain Bottom Slab Concrete	M20	26/11/2020	24/12/2020	150.34 X 149.26 X 151.00	22439	**8.105**	536.1	23.9	

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 26/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-11-20

Customer ID : Drain Side Wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	151.47 X 150.90 X 149.75	22858	**8.015**	543.4	23.8	23.4
2	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.87 X 149.76 X 149.46	22444	**8.067**	515.8	23.0	
3	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.05 X 151.24 X 150.90	22542	**8.105**	528.1	23.4	

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 26/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-11-20

Customer ID : Drain Side Wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	151.41 X 151.00 X 150.19	22863	**8.015**	539.3	23.6	23.1
2	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.15 X 150.58 X 149.06	22459	**8.067**	512.0	22.8	
3	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.47 X 149.20 X 149.33	22300	**8.105**	514.0	23.1	

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Quality Manager

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 26/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-11-20

Customer ID : Drain Side Wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 26/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	151.41 X 151.00 X 150.19	22863	**8.015**	539.3	23.6	23.1
2	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.15 X 150.58 X 149.06	22459	**8.067**	512.0	22.8	
3	Drain Side Wall Concrete	M20	28/11/2020	26/12/2020	149.47 X 149.20 X 149.33	22300	**8.105**	514.0	23.1	

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AE W10

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

QC ABSTRACT

NAME OF WORK: Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	PCC(M15)	Compressive Strength(7days and 28days)	1 set /1-5 cum	2.94	2	2
7	RMC(M20)	Compressive Strength(7days and 28days)	4 set /31-50 cum	30.87	8	8

Suvetha. NK
AE W10

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Format No: CP/TF/01

TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-11-30-67** **Date: 23-11-20**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 20-11-20

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 20-11-20

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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Date.....
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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-11-30-67** **Date: 23-11-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	_
2	Specific Gravity	2.59	_
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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R RUDRAPRASAD
Authorized Signatory
Technical Manager

****End of Report****

Senthil.NL
AE W10

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-11-30-67** **Date: 23-11-20**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.
Agency	:	Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010
Customer Reference	:	BBMP/EE/BTP/WO/136/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-11-20
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	20-11-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	255	255	5.1	94.9	90-100
3	10 mm	2789	3044	60.9	39.1	25-55
4	4.75 mm	1545	4589	91.8	8.2	0-10
5	Pan	411	5000	100	0	–

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AE, W10

CIVIL PRO Sig. Date BANGALORE

Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-11-30-67** **Date: 23-11-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	2.65	_
4	Bulk Density(Loose) (Kg/l)	1.53	_
5	Bulk Density(Compacted) (Kg/l)	1.55	_
6	Water Absorption(%)	0.25	_
7	Aggregate crushing Value(%)	24.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.8	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-11-30-67** **Date: 23-11-20**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.
Agency	:	Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010
Customer's Reference	:	BBMP/EE/BTP/WO/136/2020-21
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	20-11-20
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	20-11-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	318	318	2.1	97.9	90-100
3	20 mm	7441	7759	51.7	48.3	30-70
4	10 mm	5152	12911	86.1	13.9	10-35
5	4.75 mm	1711	14622	97.5	2.5	0-5
6	Pan	378	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-11-30-67** **Date: 23-11-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	8.1	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	7.5	
3	Specific Gravity	2.61	_
4	Bulk Density(Loose) (Kg/l)	1.38	_
5	Bulk Density(Compacted) (Kg/l)	1.42	_
6	Water Absorption(%)	0.26	_

* The results obtained are satisfactory as per standard requirements.

Note:

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Authorized Signatory
Technical Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-11-30-67** **Date: 23-11-20**
Customer	:	Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.
Agency	:	Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010
Customer's Reference	:	BBMP/EE/BTP/WO/136/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	20-11-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	21-11-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.53	–
2	Finess by Air permeablity method (m^2/kg,Min)	287.5	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	155 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

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TEST RESULTS OF STEEL

Lab ID : **CP-2020-11-30-67** **Date: 23-11-20**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 20-11-20

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.

Date of test: : 21-11-20

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.391	512	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.616	528	672	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.888	544	668	20.0%	Satisfactory	Satisfactory

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 01/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 26-11-20

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M15 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 01/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M15	24/11/2020	01/12/2020	150.50 X 151.10 X 149.90	22741	**8.934**	279.1	12.3	12.3
2	PCC	M15	24/11/2020	01/12/2020	150.61 X 150.06 X 149.09	22600	**8.051**	279.6	12.4	
3	PCC	M15	24/11/2020	01/12/2020	150.50 X 151.64 X 150.48	22822	**8.440**	279.4	12.2	

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 03/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 28-11-20

Customer ID : Drain Bottom Slab Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	151.86 X 150.82 X 151.95	22904	**8.731**	427.7	18.7	18.3
2	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	151.19 X 151.03 X 149.26	22834	**8.561**	413.6	18.1	
3	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	149.84 X 149.41 X 151.95	22388	**8.695**	408.8	18.3	

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 03/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 28-11-20

Customer ID : Drain Bottom Slab Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 03/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	151.42 X 149.61 X 149.32	22653	**8.731**	423.1	18.7	18.5
2	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	150.94 X 151.68 X 150.16	22895	**8.561**	425.4	18.6	
3	Drain Bottom Slab Concrete	M20	26/11/2020	03/12/2020	149.65 X 149.75 X 149.82	22410	**8.695**	406.8	18.2	

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 05/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-11-20

Customer ID : Drain Side Wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	150.68 X 150.12 X 149.63	22620	**8.731**	416.2	18.4	18.4
2	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	151.03 X 151.62 X 149.67	22899	**8.561**	415.4	18.1	
3	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	149.75 X 149.27 X 151.87	22355	**8.695**	416.1	18.6	

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2020-11-30-67** **Date: 05/12/2020**

Customer : Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Ramanna Garden Blue Moon Garden and Bloom Field Garden in Ward No 10 Doddaommasandra Vidyaranyapura Sub Division.

Agency : Sri. Prakash.K , No:09, 2nd B Main Road, Jooganahalli, Rajajinagara, 2nd Block, Bengaluru.560010

Customer's Reference : BBMP/EE/BTP/WO/136/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-11-20

Customer ID : Drain Side Wall Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/12/2020

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	151.61 X 150.59 X 151.08	22831	**8.731**	418.2	18.3	18.7
2	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	149.62 X 149.65 X 150.85	22392	**8.561**	424.2	18.9	
3	Drain Side Wall Concrete	M20	28/11/2020	05/12/2020	149.57 X 150.06 X 150.64	22445	**8.695**	419.7	18.7	

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Quality Manager

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